AWIPS INFORMATION NOTE 5 (for Electronics Systems Analysts) Engineering Division W/OSO31: WJB/FJZ

SUBJECT: Advanced Weather Interactive Processing System (AWIPS) Local Data Acquisition and Dissemination (LDAD) Interface Information

PURPOSE : Provide information describing the capabilities and interface requirements of the LDAD

BACKGROUND : The deployment of the LDAD systems will begin during the fall of 1998. The installation/retrofit of the LDAD equipment rack will be performed by the AWIPS prime contractor, PRC. However, there will be no AWIPS/LDAD functionality until software Build 4.1 is delivered and installed at the retrofit and forward-fit AWIPS sites. The 4.1 software load will only support IFLOWS, ALERT, Mesonets PCs, LARCs, and the Interactive Menu User which is basically a weather products bulletin board for external users. Software Build 4.2 will support the remaining LDAD functionality as depicted in the figure 1 diagram.

This note describes the Build 4.1 LDAD functionality and interface requirements to ensure a smooth process in integrating LDAD with the current legacy systems.

INTERFACES

In addition to interfacing with remote data loggers, AWIPS/LDAD systems will initially support interfaces to the local area network and the following on-site PC-based systems/equipment:

IFLOWS
ALERT
Mesonets
The connection between collocated systems such as IFLOWS, ALERT, and Mesonets with the AWIPS/LDAD system will be Ethernet based with TCP/IP protocol, 10BASE-T, Unshielded Twisted Pair and will initially support TELNET and FTP services. Other protocol stacks will not be supported by the initially configured AWIPS/LDAD subsystem. Figure 1 depicts a typical interface configuration of the LDAD subsystem. The LARC interface will use the established modem dial-up connection and a modem speed of no less than 300 baud.

The AWIPS/LDAD system will not interface with remote automated observation systems with baud rates less than 300. Some legacy systems such as the device for automated remote data collection (DARDC) and data loggers may currently be running at baud rates of less than 300. If LDAD is to interface with these systems, they must be reconfigured to operate at a baud rate of 300 or faster. Changes should be coordinated with the Centralized Automated Data Acquisition System and other users.

The initial implementation of the AWIPS/LDAD software, Build 4.1, will not support the DARDC emulation mode for the Handar 550 data logger. Also, the only data logger that will be supported is the Handar 550A. Other data loggers such as Sutron, Cambell Scientific, Synergetic, and Design Analysis Associates will not be supported by the LDAD initial implementation.

REGIONAL ISSUES TO BE RESOLVED

Since the ALERT systems are not owned by the National Weather Service (NWS), a change to the Memorandum of Understanding with the owners will be required to reconfigure these PCS for a 10BASE-T LAN connection. The Windows 95 version of IFLOWS software has only 60 percent of the functionality of the current IFLOWS software. In addition, there are more than 100 IFLOWS systems, most of which are not owned by NWS but will have to be upgraded to the same software baseline that will be used for LDAD. The Office of Hydrology is preparing a patch to the IFLOWS software to accommodate this connection.

AWIPS/LDAD SYSTEM MANAGER'S MANUAL

The current draft of the Build 4.1 LDAD System Manager's Manual is on the Web at:
http://ls1-fslc.fsl.noaa.gov/restricted/SystemManagers.html
TECHNICAL ASSISTANCE

Please refer any technical questions regarding this note to Walid Bannoura, W/OSO31, at 301-713-1847x120. Questions regarding AWIPS and LDAD installation schedules should be addressed to Scott Dye, W/APO2, 301-713-3409x109.

Signed by John McNulty, Chief, Engineering Division